United States Department of Commerce

Request for Comments on the
Indo-Pacific Economic Framework

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Intel Corp (Intel) welcomes the opportunity to provide the Department of Commerce with insights relevant to Indo-Pacific Economic Framework (IPEF). As an American company with a global footprint, Intel encourages the U.S. government to work closely with the partner countries to deepen economic relations in the Indo-Pacific region to coordinate approaches in addressing global economic challenges.

Intel is one of the world's largest semiconductor manufacturers and is the only remaining U.S. company to both design and manufacture leading-edge semiconductors. Semiconductors are America's fourth largest export, and no other semiconductor company has a more positive impact on the American economy than Intel. Intel semiconductors are essential to modern life and future innovation, including today's networks and computers, as well as next-generation technologies such as 5G, artificial intelligence, quantum computing, and autonomous vehicles.

Unlike its main competitors, Intel maintains most of its intellectual property in the United States. Intel also concentrates its research and development (R&D) and manufacturing in the United States, with additional manufacturing sites in Europe and Israel. Intel has invested in U.S. manufacturing for over 50 years and continues to be a leading contributor to U.S. R&D and capital investment, ranking sixth among U.S. investors in both areas. These investments support tens of thousands of U.S. jobs, including about half of the more than 120,000 Intel employees worldwide (versus about 9% in Europe or China). Additionally, each Intel job in the United States supports an estimated 13 additional jobs, meaning Intel directly or indirectly supports more than 700,000 full-time and part-time American jobs. Intel directly contributed $25.9 billion to U.S. GDP in 2019, and the total direct and indirect GDP impact on the U.S. economy that year—$102.0 billion—accounted for one half of 1% of U.S. GDP.

Intel's commitment to U.S. manufacturing is demonstrated by the $43.5 billion in new capital expenditures announced by the company within the last year. In 2021, Intel announced over $23.5 billion in new U.S. capital expenditures to build and expand manufacturing and packaging facilities in Arizona and New Mexico. Intel announced an additional $20 billion investment in two new manufacturing facilities in Ohio—with the potential to grow investments at this site up to $100 billion over the next decade. With CHIPS for America Act funding, Intel is prepared to invest even more in U.S. manufacturing. These additional investments will create tens of thousands of additional jobs in the United States, including Intel jobs, construction jobs, and jobs throughout the supply chain ecosystems that take root following the construction of new Intel facilities.

The company's recent investments are made possible by the revenue that Intel earns in the United States and around the world. Importantly, Intel's ability to invest in the United States depends on its ability to compete in global markets. The IPEF should work toward elimination of barriers for growth, and leveling the playing field.

In the Indo Pacific region, Intel has important operations in Malaysia and Vietnam. Intel operates Intel Products Vietnam (IPV) as the largest assembly and test manufacturing facility in the Intel assembly and test network. It has more than 2,700 employees in Vietnam and serves customers around the world. IPV is

one of 10 manufacturing sites that Intel has globally and remains the largest U.S. high-tech investment in Vietnam. In 2021, Intel increased its investment in Vietnam to build a state-of-the-art chip assembly and test manufacturing facility in Saigon Hi-Tech Park (SHTP), bringing Intel's total investment in its Vietnam facility to $1.5 billion. Intel Malaysia has operated for over 50 years and was Intel's first site outside the United States. In 2021, Intel initiated plans for additional investment in its Malaysian assembly test manufacturing operations, while also building out die prep capability and new advanced packaging capabilities. Over the next decade, these plans will create more than 4,000 new Intel jobs and more than 5,000 local construction jobs in addition to the roughly 12,000 Intel employees in Malaysia. Intel's footprint in the Indo Pacific region demonstrates the importance of the IPEF and the need to eliminate any friction points.

General negotiating objectives for the proposed agreement.
Given the importance of the Indo-Pacific region, it is Intel's hope that the U.S. will move forward with an ambitious IPEF with enforceable legal commitments centered around expanding opportunities for the American semiconductor industry and our workers. Intel believes that the IPEF should open new markets for U.S. semiconductor businesses in the Indo-Pacific region. The IPEF presents an important opportunity to strengthen ties with the other countries in the framework.

The global shortage of semiconductors has presented tough challenges for the U.S. economy. A modest shortage was predicted before the pandemic. The gap between supply and demand was approximately 5%, but the pandemic increased the gap to 20%. These gaps were exacerbated by the digital acceleration also caused by the pandemic, further squeezing the semiconductor supply chain. It is Intel's hope that the IPEF would work to eliminate barriers in the supply chain and help to ensure that the industry can meet the global demand.

Labor-related matters.
Intel understands that the global economy is shifting, and future workforces will need key new skills as labor needs evolve. According to the World Economic Forum's Future of Jobs Report 2020, while 85 million jobs will be displaced by 2025, some 97 million new jobs will be created during this period. These shifts will require additional high-skilled workers, particularly in science, technology, engineering, and mathematics (STEM) fields. Artificial intelligence (AI) skills, for example, are often highlighted as critical to the expanding digital economy.

IPEF should support efforts to address these labor challenges, including by both securing commitments to education and workforce training and facilitating essential labor mobility in support of expanded trade, investment, and economic activity. While global economic shifts promise to create more jobs than they displace, job displacement is likely to create short-term economic insecurity for some workers. Commitments to education and training programs, including targeted upskilling and reskilling efforts, can help address these challenges. At the same time, expanded trade and economic cooperation requires reciprocal arrangements for the provision of services, particularly among investors, traders, and highly skilled specialized workers. To the extent possible, the IPEF should seek to secure and expand upon existing avenues in each of these areas.

Environment and Climate-Related Matters.
Intel believes that global climate change is a serious environmental, economic, and social challenge that warrants an equally serious response by governments and the private sector. By its nature, climate change is a global problem that defies an easy solution or only contributions by a narrow group of countries or a few industry sectors. Addressing climate change requires broad leadership by both the public and the private sectors. The IPEF presents an opportunity to engage with the countries in the region and ensure that all of the actions undertaken are done through the lens of climate change.

Intel believes the U.S. government should be actively engaged in the development of international climate change policies to ensure any resulting international agreements are realistic and pragmatic. The IPEF is an opportunity to engage with countries in the region. Intel strongly supports the Paris Accord process and believes the work of the IPEF should align with that agreement.

A central tenet of international climate policy negotiations should be ensuring that all countries – developing and developed – contribute by implementing programs to mitigate climate change. For equity, economic and political reasons, the contributions of different countries do not need to be the same in design or equal in scope. However, all must contribute appropriately to mitigate climate change to acceptable levels at a reasonable cost.

Intel is one of the largest voluntary purchasers of "green" power in the U.S., according to the U.S. Environmental Protection Agency (EPA). Energy-efficient performance is a driving force in the design of our products. Intel set challenging 2030 goals to increase product energy efficiency 10x for Intel client and server microprocessors to reduce our Scope 3 emissions. Over the last decade, we have worked with suppliers and customers in efforts to eliminate lead and halogenated flame-retardants from our products.

Recent studies verify that information and communications technology (ICT) devices, powered by Intel's silicon products, can enable significant progress in reducing greenhouse gas emissions by driving end-use energy efficiency gains. The IPEF should get all the governments in the framework to push policies that recognize and encourage a bigger role for the ICT industry in devising climate change mitigation and adaptation solutions.

When regulating the energy efficiency of ICT devices, the IPEF should get binding commitments from governments that they will carefully classify devices to compare like products so that different classes of products are not subjected to 'one-size-fits-all' limits. The commitments should also respect consumer preferences and avoid constraining device functionality. Poorly designed regulations (e.g., idle power, network standby power requirements) applied to ICT devices and data centers can restrict the functionality that delivers the handprint benefits. Such restrictions can especially affect the rapidly growing deployment of Internet of Things technologies.

Digital Economy-Related Matters.
Intel is working to unleash the potential of data, leading to more capable and efficient networks and pervasive digital connectivity at the edge. Moore's Law set the pace for the digital revolution and continues to inspire us today. Data underpins physical trade by enabling the implementation of trade facilitation. Data is at the core of new and rapidly growing service supply models and technologies such as cloud computing, the Internet of Things (IoT) and Artificial Intelligence (AI). Enabling cross-data transfer and removing barriers for data flows is essential for the continued growth of all industries and technologies.
Barriers to digital trade exist and, in some cases, are growing throughout the Indo-Pacific region. Companies must navigate challenges from last-mile delivery logistics to secure cross-border payments. New data localization policies and other hurdles are emerging for international digital trade. Disruptive effects on business and the workforce will need to be navigated, while questions on taxing global digital activities are ongoing.

Companies should not be required to disclose source code, algorithms, or encryption keys as a requirement for market access or entry. Innovation depends on the ability to develop and use proprietary software and to secure products and systems with private encryption keys. Some economies have unfairly advantaged their domestic industry by demanding that foreign companies transfer source code, algorithms or encryption keys as a condition for doing business in their territory. Robust encryption technology is

necessary to protect digital devices and networks. As the attack surface expands and the impact of cyber-attacks continues to grow, regulatory barriers to the use of cryptography run the risk of decreasing the overall security of computing devices and the internet. Fragmented, localized or overly prescriptive approaches to security requirements, which diverge from international standards, may hinder interoperability and market access.

The IPEF should include commitments to minimize requirements to use specific technologies. The framework should constrain governments from picking winners and losers. Technology mandates are only justified in very limited circumstances that deal with public health and safety; yet, as global competitiveness increases, attempts to require the use of domestic technologies to favor local companies are increasing as well.

The IPEF should get commitments from the other countries to continue the moratorium on customs duties on electronic transmissions. Companies like Intel navigate challenges from last-mile delivery logistics to secure cross-border payments. New data localization policies and other hurdles are emerging for international digital trade. Disruptive effects on business and the workforce will need to be navigated, while questions on taxing global digital activities are ongoing.

Broad compulsory licensing requirements or requiring unnecessary confidential information as a condition of product approvals and market access are on the rise in emerging markets. The U.S. government should make it a priority to remove these barriers to international trade as part of the IPEF.

Regulatory Compatibility and Technical Barriers to Trade.
Intel actively participates in the standards development process for the Information and Communications Technology (ICT) sector. Standards are essential to Intel's business, provide important benefits to industry, consumers, and governments worldwide and have a critical role in today's information technology, communications, and consumer electronics industries. Global supply chains are built upon globally adopted standards. Businesses and consumers choose standards-based products because of important benefits such as interoperability and consistency in quality. Companies like Intel are able to grow when the industry develops successful standards. Standardization in the ICT sector continues to evolve. New organizations are being formed to develop standards on a regular basis.

Competition-Related Matters.
Intel supports a strong, predictable, and credible competition law regime that promotes economic efficiency, growth, investment, and consumer welfare. Many companies like ours spend millions of dollars to ensure that our conduct not only complies with applicable law, but our actions actively promote competition in the market. We support strong antitrust enforcement to restrain anti-competitive conduct.

Regretfully, we have seen competition law cases arise in the Indo-Pacific region that are ordinary commercial disputes with no significant impact on competition in the relevant market. In our view, these commercial dispute cases should be dismissed at the threshold. Investigations by competition authorities require significant time and money to be spent by all parties. These resources could be productively employed elsewhere. Importantly, the misapplication of competition laws can negatively impact foreign investment and collaborations with local companies. Intel hopes that countries in the region carefully examine the economic impact of cases before opening investigations. If the alleged conduct has little or no adverse effect on competition in the relevant market, further action should not be taken. This effects-based enforcement approach is applied by most modern jurisdictions around the world. Another dimension of this effects-based approach is an open and transparent investigation procedure where the target of investigation is informed of the economic and factual evidence against it and is provided with opportunities to meet such evidence. This is also in line with the procedures adopted by other jurisdictions

and multi-lateral agencies such as the Organisation for Economic Co-operation and Development (OECD).

Customs and Trade Facilitation Issues.
Intel supports IPEF codifying customs and trade facilitation policies that foster administrative ease, cost-effectiveness, timely and barrier-free entry, predictability, fair enforcement, and transparency with respect to cross border trade between member countries. Intel depends heavily on the ability to move products across international borders quickly, cost-effectively, and with minimal burdens. Sound government-trade policies and procedures are therefore highly important to Intel. Various studies have demonstrated that sound trade facilitation improvements help to reduce total trade costs by more than 14%.

Such policies would ensure that consumers can access the best available products at market-based prices. Maintaining modern and easy-to-follow customs and trade procedures is highly important to major global supply chain participants like Intel. Intel's business activities span over 100 countries, with nearly 80% of sales taking place outside the United States.

The IPEF should build on the trade facilitation and modernization efforts of the Association of Southeast Asian Nations (ASEAN) single window, as many of the countries are participants in the agreement. The framework should promote government alignment to streamline what documents are needed to facilitate trade with a goal of companies only having a single submission of data, a single synchronous processing of information, and a single decision-making for customs release and clearance among participating countries.

Supply Chain.
The COVID era and recent events in Eastern Europe exposed fragile supply chains and illustrated how quickly unexpected events can break supply chains. The White House has convened briefings for lawmakers to highlight the urgency of addressing the semiconductor shortage, and publicly warned "A significant interruption to our supply of semiconductors could cause historic damage to the U.S. economy – damage far greater than the impact of chips shortages on the American auto industry right now – and would undercut our technological competitiveness and military advantages over adversaries globally." Accordingly, IPEF should prioritize measures to further improve semiconductor supply chain resiliency and diversity. The essential insights from the White House's 100 Day report on semiconductor supply chains identify specific measures and inputs to semiconductor supply chains, and IPEF can play a key role in cultivating new sources and suppliers for critical inputs. Although Intel manages a robust global supply chain designed for resilience, diversity, and sustainability, Intel's success depends on continuous evaluation of existing suppliers and ongoing assessment of potential new suppliers and sources. IPEF efforts to promote robust standards of safety, quality, technology, availability, and sustainability will help semiconductor supply chain managers improve supply chain resilience.

Export Controls.
The IPEF presents an opportunity for the countries to work together to coordinate export control policy. Export controls are powerful tools that are best used strategically, in a manner that is integrated in a unified strategy with other tools of national policy, narrowly tailored to address specific national security concerns, and implemented multilaterally. Establishing a multilateral approach to export controls is most effective for protecting international security and supporting a global level-playing field. To do that, a harmonized export control regime in the Indo-Pacific region would ensure products are available in an increasingly digital world.